

ABSTRACT

An emission control device stores SO_x when the air/fuel ratio of exhaust gas is lean, and releases the stored SO_x when the temperature of the emission control device is raised to a desulfurization temperature or higher and the air/fuel ratio of the exhaust gas becomes substantially equal to the stoichiometric air/fuel ratio or rich. The emission control device's temperature is controlled to be within a predetermined temperature range whose lower limit is substantially equal to or higher than the desulfurization temperature, and sulfur is released from the emission control device by controlling the air/fuel ratio of the exhaust gas to be substantially equal to the stoichiometric air/fuel ratio or rich when the temperature of the emission control device is within the predetermined temperature range. In the method, the temperature control process and the desulfurization process are repeated when sulfur is to be released from the emission control device.